

ABSTRACT

5 A method for producing stable atmospheric pressure glow discharge plasmas using RF excitation and the use of said plasmas for modifying the surface layer of materials. The plasma generated by this process and its surface modification capability depend on the type of gases used and their chemical reactivity. These plasmas can be used for a variety of applications, including etching of organic material from the surface
10 layer of inorganic substrates, as an environmentally benign alternative to industrial cleaning operations which currently employ solvents and degreasers, as a method of stripping paint from surfaces, for the surface modification of composites prior to adhesive bonding operations, for use as a localized etcher of electronic boards and assemblies and in microelectronic fabrication, and for the sterilization of tools used in
15 medical applications.